

**2016**



# **Public Comment DRAFT**

## **FISCAL YEAR 2016 ANNUAL PROGRAM PLAN & ALLOCATIONS**

FOR THE YEAR JULY 1, 2015 TO JUNE 30, 2016

## **EXECUTIVE SUMMARY**

The fiscal year (FY) 2016 plan and budget is largely a continuation of the FY 2015 plan and budget. In the FY 2015 plan over \$5.8 million was allocated to eight different program areas and those programs are all continuing into FY 2016. The Clean Energy Development Fund (CEDF) did not receive any new funding for FY 2016 and therefore the only revenue to budget for is the estimated loan repayments and the interest earned on CEDF's balance of funds. In addition to the incoming revenue there is approximately \$750,000 of unencumbered funds that will be carried forward from FY 2015 into FY 2016.

The CEDF will continue to focus on advanced wood heating as a priority. Last year the Fund established the programs and parameters for this sector and anticipates that in FY 2016 it will start to see progress in the quality and quantity of advanced wood heating systems installed, as well as in the maturity of the entire advanced wood heating economic sector in Vermont.

## **PURPOSE OF THE ANNUAL PROGRAM PLAN and BUDGET**

The purpose of the Annual Program Plan is to identify the initiatives and programs that the CEDF will pursue during the fiscal year and to establish an annual budget for the expenditure and program allocation of CEDF funds.

The Annual Program Plan and associated budget represent the CEDF's efforts to use the funds available to meet the legislated purpose of the CEDF as well as the goals and strategic approach adopted in CEDF's 2012 Strategic Plan.

## **MANAGEMENT & GOVERNANCE**

In accordance with 30 V.S.A. § 8015, the CEDF is administered by the Department of Public Service (PSD). A Fund Manager hired by the PSD, with assistance from other PSD staff, manages the day-to-day operations of the Fund.

The Clean Energy Development Board (Board) reviews and approves the CEDF Annual Program Plan, budget and program designs. As designed in 30 V.S.A § 8015, the Board consists of seven persons, three appointed by the Commissioner of the Public Service Department and two each by the Chairs of the Senate and House Committees on Natural Resources and Energy.

### **Clean Energy Development Fund Board**

The current Board members, the appointing authority who appointed them, and the year each member's term expires are:

- Gaye Symington, Chair (*House Energy Committee Chair, 2015*)
- Sam Swanson, Vice Chair (*Senate Energy Committee Chair, 2015*)
- Jo Bradley (*PSD Commissioner, 2015*)
- Jennifer Hollar (*PSD Commissioner, 2015*)
- Linda McGinnis (*PSD Commissioner, 2017*)

- Johanna Miller (*House Energy Committee Chair, 2017*)
- Mark Whitworth (*Senate Energy Committee Chair, 2017*)

## **CEDF GOALS AND OBJECTIVES**

To guide the CEDF a five year strategic plan was developed in 2012 (published in January, 2013). That Plan was built to advance the founding purpose of the CEDF to promote the development and installation of cost-effective and environmentally sustainable electric power and thermal energy resources for the long-term benefit of Vermont consumers, primarily with respect to renewable energy (RE) resources.<sup>1</sup>

The CEDF reviewed the strategic plan in preparing this FY 2016 plan and determined that the goals and strategies established in 2012 should continue to provide guidance for the Fund's annual activities and expenditures.

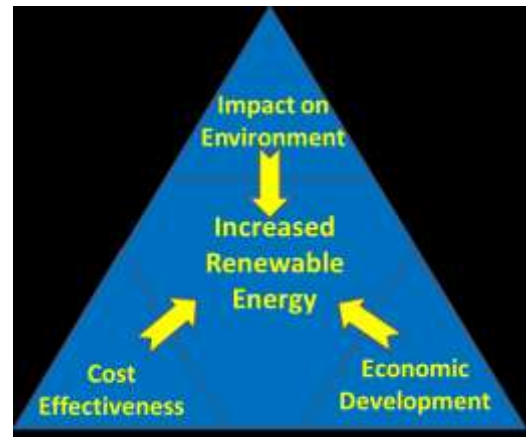


Figure 1.

### Vision

CEDF's vision is to serve the citizens of Vermont by increasing local small-scale renewable energy generation while maximizing associated economic development. The Fund coordinates with other state programs and private entities to integrate and advance renewable energy across all sectors of the State's energy economy.

### Goal and Objectives

Supporting the vision is a primary goal of **increased renewable energy generation** in Vermont (thermal and electrical). Supporting the primary goal are three objectives (Figure 1):

1. Increase the Economic Development of the Renewable Energy Sector
2. Increase Cost Effectiveness of Renewable Energy
3. Decrease Environmental Impacts of Vermont's Energy Use

### Strategies

In pursuit of the primary goal and the three objectives the CEDF will focus on nine strategies:

- 1) Focus on select renewable energy technologies where funds can have the greatest impact in reaching the CEDF goals
- 2) Identify deployment barriers preventing increased renewable energy generation and coordinate with industry, state agencies, and private organizations to develop solutions that overcome those barriers in order to strengthen and build the markets for select distributed RE technologies
- 3) Build connections between renewable energy and energy efficiency
- 4) Increase jobs and revenue in the Vermont clean energy industry sector

<sup>1</sup> 30 V.S.A. § 8015 (c)

- 5) Educate and support clean energy developers and businesses in obtaining other incentives and financing
- 6) Support and strengthen clean energy finance and investment-related activities
- 7) Increase the leverage of CEDF funds while helping to drive the costs of renewable energy down
- 8) Focus support on the CEDF programs that maximize the reduction of Vermont's energy related carbon emissions
- 9) Continually evaluate programs, activities, and outcomes in order to adjust programs as necessary to meet goals

## **PLANNING FRAMEWORK**

While this annual plan focuses on the programs and spending of one year, the planning decisions are based on a framework that includes the assumption that the CEDF will receive additional funding of at least \$2 million annually. Even though there is not currently any secured on-going funding source for the CEDF, the Fund has chosen to plan its work as if there will be successive years of fully funded programs that evolve strategically.

Assuming multiple years of programmatic activity the CEDF will continue to use the planning framework of knowledge, practice, and results (KPR). The KPR framework provides a multi-year guide to make the best use of public resources in accomplishing CEDF's goals.

First, advancing the field of clean energy in the state requires knowledge about what is taking place in the renewable energy market. The CEDF will seek to obtain and maintain market knowledge in key clean energy sectors. Secondly, this knowledge will be used to inform the strategic decisions that create programs, or CEDF's practice. Understanding how CEDF funds stimulate beneficial changes in the market place will provide results that will be evaluated. The evaluation results will provide additional data/knowledge that will be used for changes to the Fund's practice. These three (KPR) components form a cycle of continuous improvement that can be applied within the targeted clean energy sectors as well as holistically across Vermont's entire clean energy economy.

The CEDF will use the KPR template as the framework to guide program development and strategic allocation of funds. When constructed annually, the KPR template will comprise the framework for the CEDF's annual work plan. Each annual plan can then be linked over time to compose a multi-year approach intended to evolve robust economic systems through which companies can offer cost effective renewable energy solutions to Vermont consumers.

## **OVERVIEW OF PLAN & BUDGET**

Historically, the CEDF has focused on a set of core tools including rebates offered through the Small Scale Renewable Energy Incentive Program (SSREIP), competitive solicitations to award grants, and targeted loans. After the strategic planning process in 2012 the Fund transitioned

away from loans and instead initiated efforts to provide credit enhancements for financial products offered by the private market for renewable energy projects.

Over the last two years the Fund has continued to use the SSREIP as its primary program to affect change. The CEDF reduced the use of broad-based competitive grants for installations in favor of working to overcome identified barriers that stymie growth for targeted technologies. For FY 2016 the CEDF will continue to follow the key strategies of its 2012 Strategic Plan and continue the programs identified, funded, and started in FY 2015.

The CEDF will continue to focus on a narrow scope of renewable energy technologies in order to have the greatest impact. With the funding available the CEDF cannot effectively promote all forms of renewable energy. The CEDF continues to believe that it best serves its mission and the people of Vermont by focusing its efforts on a strategic sector of the renewable energy economy, while monitoring and keeping a pace with other renewable energy technologies and clean energy clusters.

In 2015 the CEDF decided to focus on advanced wood heating, and in particular the bulk wood pellet heating market and supply chain throughout Vermont. Using the KPR process the CEDF reaffirmed that it can have the greatest impact on its goals by focusing on the advanced wood heating sector, but that it must continue to ensure that the wood heating systems are truly advanced in their emissions, efficiency, and use of locally and sustainably harvested wood.

The CEDF believes that the dollar for dollar investment of funds in the wood heating sector provide the biggest advancement towards the CEDF and state clean energy goals. Benefits of advanced wood heating include:

- Local fuel procurement
- Support of the local forest product industry
- Support for the maintenance and creation of a working landscape
- Creation of jobs for the installation and service of heating systems
- Building upon the Vermont wood heating manufacturing base and strong biomass heating history

In FY 2016 the CEDF will be working with the Agency of Natural Resources' Air Quality Division and Department of Forest and Parks on incorporating a wood stove change-out component into the CEDF's small scale incentive program. This effort will provide an incentive for Vermonter's to get rid of older polluting wood stoves and install new cleaner burning wood and pellet stoves.

In addition to the wood heating programs the CEDF will continue to support other existing program areas, including food and farm-based anaerobic digesters and solar thermal technologies.

CEDF's largest program was established in fiscal year 2015 with the allocation of \$2.6 million for renewable energy programs in Windham County (representing 50% of the funds CEDF received

from Energy Vermont Yankee at the end of FY 2014). In FY 2016 the CEDF will continue the programs started in FY 2015 and will take the same strategic approach to the Windham County funds as it with the state-wide funds with the addition of considering Windham County's regional economic and development plans, interests, and local input.

## **DESCRIPTION OF PROGRAMS**

The programs, and program changes, described below provide details on the Fund's plan and provide a narrative for the budgeted line items (See Appendix A).

### Windham County Programs

At least fifty percent of the funds the CEDF received from Energy Vermont Yankee in April 2014 must be spent in, or for the benefit of Windham County. This is an important opportunity for Windham County to address the local effects of the closure of the Vermont Yankee power plant as well as the county's energy economy. The CEDF's guiding principle for the Windham funds is the same as for all CEDF resources: how can the CEDF make the most progress towards the CEDF goals while creating a catalyst that spurs continued economic and technological growth after the CEDF funds have been expended?

Similar to the CEDF's overall strategic focus on local biomass heating CEDF determined that the greatest lasting benefit to the County would be achieved through a strategic, high profile focus on wood heating. In FY 2015 the CEDF awarded a \$1.6 million grant to a Windham County team lead by the Sustainable Energy Outreach Network (SEON). This grant is focused on building the wood heating market, with specific focus on building demand amongst Windham County's municipalities and public schools.

In FY 2016 the Fund will continue to work with SEON and their "Windham Wood Heat" program to maximize the positive impact of that grant.

In addition to the biomass heating grant the CEDF will continue the existing solar financing program started in FY 15 for Windham County residential customers. As the state-wide PV rebate drew to a close at the end of 2014 the financial products available to home-owners that want to install solar systems became critical to the growth of the Windham County solar sector. The CEDF has signed a \$300,000 grant agreement with VSECU – which has a branch in Brattleboro - to offer solar loans with a reduced interest rate (based on income, with lower income borrowers receiving a greater interest rate buy-down) to Windham County residence that will make "going solar" an easier option and that will help to build capacity and depth of the Windham County solar market.

Also as a continuation of the FY 2015 plan, the CEDF will issue a solicitation for anaerobic digestion projects located in the county during FY 2016. The CEDF sees potential in supporting new projects in Windham County's anaerobic digester sector. Like the rest of the state, Windham County is working to divert organic waste away from landfills. The CEDF will use

\$300,000 to support anaerobic digestion on farms and/or food waste only digesters in the county.

#### Small Scale Renewable Energy Incentive (SSREI) Program

The SSREI Program will continue with an allocation of \$500,000 in FY 2016. The program has been a proven mechanism to grow the residential, small commercial and municipal markets for mature small-scale renewable energy technologies in a widely distributed and accessible manner. The program's advantages are that it is market based, cost effective, highly leveraged, simple, and access to the funds is open and transparent. The program will continue to provide incentives for wood pellet heating systems for all of FY 2016, and for solar hot water systems through the end of December 2015. In addition, in FY 2016 the program will complete a pilot program investigation into solar air heating that was approved in the FY 2015 plan and budget.

The CEDF will be supporting the further development of solar PV by continuing a state-wide credit enhancement programs started in FY 2015. Both residential and commercial PV installations will have access to credit enhancement programs in FY 2016.

The Vermont Small-Scale Renewable Energy Incentive Program will continue to be administrated under a contract with the Renewable Energy Resource Center ([www.nerc-vt.org](http://www.nerc-vt.org)).

#### Biomass Heat - Bulk Pellet Market

The sustainable management, harvest, transportation, and refining of wood into wood fuel creates jobs and economic activity that is largely local. Switching from fossil fuel to wood heating provides great savings. The dramatic cut in heating costs leaves, on average, \$1,500 per year in the pockets of home owners and businesses that change over to wood heating.

Advanced wood heating has a foot-hold from which the CEDF plans to build and leverage further progress. In FY 2016 the CEDF will issue an RFP to support the bulk pellet delivery market and will continue to provide competitive grants for school and low-income housing organizations to install wood heating systems to build market demand for bulk delivered wood pellets.

#### Farm Energy Program:

The Farm Energy Program will leverage parallel efforts by collaborating with others. The primary partner will be the Agency of Agriculture, Food and Markets. The CEDF will also continue to collaborate with the Agency of Natural Resources and Green Mountain Power's Cow Power program, along with others.

The Farm Energy Program for FY 2016 will focus on strengthening the current fleet of agricultural digesters with an emphasis on driving down costs of operating the digesters, increasing the use of high-energy off-farm substrates, and in supporting the installation of smaller systems in order to make the technology increasingly feasible for smaller farms.

The program will build off the two food-waste digester pilot projects started in FY '15 farm energy program. The CEDF believes such systems could have great potential to divert food waste organics from landfills (as required by Act 148) into renewable energy co-generation plants while also helping the profitability of farms.

#### Clean Energy Knowledge Building:

With the Fund's focus on advanced wood heating there is a need for baseline data from which we can measure progress and use in our program evaluations. In addition, the fund has a need for detailed market data to help inform program design and market health. In FY 2016 the CEDF will issue a solicitation to hire a contractor to help with both the baseline data and developing more detailed knowledge for the CEDF of the Vermont wood heating market.

The CEDF will also investigate the potential to develop, together with industry stakeholders, a detailed roadmap strategy for advanced wood heating expansion in VT.

#### Program Evaluation

The CEDF will sustain its commitment to program evaluation. The CEDF has regularly tracked and reported how CEDF's resources have been used and what have been the resulting accomplishments, including the number and types of projects that have been funded, the renewable energy capacity that has been constructed, and the environmental benefits these projects would provide.

However, while these reports effectively track progress made toward increasing the installation of new renewable energy capacity in Vermont, a more comprehensive assessment of program effectiveness including a continuous learning cycle consisting of planning, action and reflection based on data gleaned from funded activities will enable the CEDF to improve program performance and will communicate the progress that the Fund is making.

Accordingly, the CEDF will dedicate staff and other program resources to measuring progress toward the CEDF goal and objectives, identifying barriers facing the programs, and revealing program delivery problems. Based on the data collected the CEDF staff will recommend action to overcome barriers, to address problems and to improve overall CEDF program performance. The successful conduct of this monitoring and evaluation should produce benefits in program productivity that far exceeds the costs. These monitoring and evaluation efforts will assess the:

- Contribution the CEDF programs are making to increasing the amount of renewable energy in Vermont
- Progress being made toward CEDF objectives
- Cost-effectiveness of the CEDF program investments
- Effectiveness of the CEDF program implementation processes
- On-going performance of funded projects



Vermont Renewable Energy Industry Survey:

The Fund will continue to conduct its annual Vermont Renewable Energy Industry Survey. The 2016 survey will be the third year of this effort to research, analyze, and document the size, scope, and impact of the clean energy industry in Vermont. The CEDF will continue to work collaboratively with the Agency of Commerce and Community Development, the Department of Labor and make use of Castleton State College's Polling Institute for this program. The survey data and analysis will provide specific market information that can be used to gauge the effectiveness of state clean energy policies and incentives designed for growing this sector of the economy.

American Recovery and Reinvestment Act (ARRA) Revolving Loan Funds

The CEDF created a \$3.8 million revolving loan fund with ARRA funds in 2010. In 2012 the Fund decided to end the loan program and re-deploy the loan funds to other CEDF programs as they were paid back. The CEDF continues to believe the greatest benefit of these ARRA funds would be to leverage other financial products being offered and not through direct loans. Approximately \$1.3 million of the ARRA funds loaned out have been repaid and are available to the CEDF in FY 2016.

Instead of providing direct loans the CEDF will use the returned ARRA loan funds for a credit enhancement program that the Fund started in FY 2015 to develop a program with the Vermont Economic Development Authority. The program will provide the best leverage of other funds to support the development of the renewable energy finance market in Vermont. The program will provide credit enhancement for commercial loans to construct commercial solar and wood heating projects.

The CEDF will also continue its support of the Heat Saver loan program. In FY 2015 the CEDF allocated \$240,000 towards this program that provides an interest rate buy-down for residential energy efficiency, solar and wood heating projects. This program started to make loans in FY '15 and will continue into FY 2016.

**ACTIVITIES AS PART OF THE PUBLIC SERVICE DEPARTMENT**

The CEDF will continue its collaborative work with other state agencies and entities in all programs. The CEDF will build upon its current role as a virtual clearinghouse in state government where many turn for information about renewable energy policies and funding options. By doing so, the CEDF strengthens relationships to help generate broader economic development outcomes such as job growth, increased revenue and clean energy cluster advancement to benefit Vermont.

## ***New Programs:***

### District Heating With Wood:

This will be the only completely new program for the CEDF in FY 2016 as the fund continues and completes programs started in FY 2014 and 2015. The Fund will reserve \$100,000 for grants to support large advanced wood fueled districting heating projects such as a building a new community/downtown district heating system or converting an existing college or institutional campus' fossil fuel district heating system to one fueled with wood chips or pellets.

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**APPENDIX A****Fiscal Year 2016 Budget & Allocations**

<b>Vermont Clean Energy Development Fund</b>			
<b>Fiscal Year (FY) 2016</b>			
<b>CEDF Revenue</b>	<b>FY 2015</b>	<b>FY 2016</b>	
Entergy Vermont Yankee Escrow Payment	5,320,546	0	
CEDF Loan Repayments (P&I)	125,296	145,000	
Other Revenue	22,000	7,500	
SunShot Grant		150,000	
Unencumbered Prior FY Carry-Forward	541,981	725,000	
<b>TOTAL FUNDS AVAILABLE</b>	<b>6,009,823</b>	<b>1,027,500</b>	
<b>CEDF Expenses</b>			
<b>Programs</b>	<b>FY 15 Budgeted</b>	<b>FY '16 New Allocations</b>	<b>FY '16 Total Budgeted Amounts</b>
Windham County Programs	2,660,273	0	2,660,273
Clean Heat Community Challenge	555,000	-200,000	335,000
Farm Energy Initiative - Digesters	350,000	0	244,430
Biomass Heat - Bulk Pellet Market	600,000	-300,000	300,000
Clean Energy Market Knowledge Building	125,000	0	125,000
Solar Permitting Training	14,000	0	14,000
Competitive Community Solar Grants	394,000	0	81,813
RE Industry Survey	150,000	0	71,075
Program Evaluation	150,000	0	50,010
Power Storage Project	50,000	0	5,000
Community Solar Contract Template	30,000	0	25,584
VT Village Green	121,000	0	19,000
SunShot Grant	188,000	0	188,000
District Heating Initiatives	0	100,000	100,000
Small-Scale Incentive Program	2,277,747	500,000	756,681
CEDF Loan Administration	0	22,500	22,500
Unencumbered Reserves		250,000	250,000
CEDF Management/Administration	150,000	155,000	155,000
<b>TOTALS</b>	<b>7,815,020</b>	<b>1,027,500</b>	<b>5,403,365</b>
<b>ARRA Fund Revenue</b>			
Unencumbered ARRA Loan Funds Available	1,491,486	150,000	1,641,486
<b>TOTAL ARRA \$ AVAILABLE</b>	<b>1,491,486</b>	<b>150,000</b>	<b>1,641,486</b>
<b>ARRA FUND ALLOCATIONS</b>			
Solar and AWH Interest Rate Loss Fund	1,000,000	0	1,000,000
Solar Residential Credit Enhancement	240,000	0	240,000
Unencumbered Reserves	251,486	150,000	401,486
<b>TOTAL ARRA \$ ALLOCATIONS</b>	<b>1,491,486</b>	<b>150,000</b>	<b>1,641,486</b>

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